

# Nothing Succeeds Like Succession

## Project Learning Tree Activity #80

### Program of Studies

#### Science:

- S-P-SI-1 (ask simple scientific questions that can be answered through observations.)
- S-P-SI-2 (use simple equipment (e.g., aquariums), tools (e.g., magnifiers, spoons), skills (e.g., observing, pouring), technology (e.g., video discs), and mathematics in scientific investigations.)
- S-P-SI-3 (use evidence (e.g., observations) from simple scientific investigations and scientific knowledge to develop reasonable explanations.)
- S-P-SI-4 (Students will design and conduct different kinds of simple scientific investigations.)
- S-P-SI-5 (communicate (e.g., speak, draw) designs, procedures, and results of scientific investigations.)
- S-P-SI-6 (question scientific investigations and explanations of other students.)
- S-P-LS-1 (Students will understand that organisms have basic needs (e.g., air, water, nutrients, light) and can only survive when these needs are met.)
- S-P-LS-2 (Students will understand that behavior of individual organisms is influenced by stimuli (e.g., touch, hunger).)
- S-P-AC-3 (Students will recognize how science helps to understand characteristics of (e.g., density, size) and changes in populations.)
- S-4-SI-1 (ask simple scientific questions that can be answered through observations combined with scientific information)
- S-4-SI-2 (use simple equipment (e.g., plant lights), tools (e.g., rulers, thermometers), skills (e.g., describing), technology (e.g., electronic media), and mathematics in scientific investigations.)
- S-4-SI-3 (use evidence (e.g., descriptions) from simple scientific investigations and scientific knowledge to develop reasonable explanations.)
- S-4-SI-4 (Students will design and conduct different kinds of simple scientific investigations.)
- S-4-SI-5 (communicate (e.g., graph, write) designs, procedures, and results of scientific investigations.)
- S-4-SI-6 (Students will review and ask questions about scientific investigations and explanations of other students.)
- S-4-LS-7 (Students will understand that organisms' patterns of behavior are related to the nature of organisms' environments. There are many different environments (e.g., deserts, rain forests) on Earth that support different types of organisms.)
- S-4-LS-9 (Students will understand that organisms change the environment. These changes may be detrimental or beneficial.)
- S-5-SI-1 (Students will identify questions that can be answered through scientific investigations combined with scientific information.)
- S-5-SI-2 (Students will use appropriate equipment (e.g., watches), tools (e.g., rain gauges), techniques (e.g., classifying), technology (e.g., calculators), and mathematics

in scientific investigations.)

- S-5-SI-3 (use evidence (e.g., classifications), logic, and scientific knowledge to develop scientific explanations.)
- S-5-SI-4 (Students will design and conduct different kinds of scientific investigations to answer different kinds of questions.)
- S-5-SI-5 (communicate (e.g., draw, speak) designs, procedures, and results of scientific investigations.)
- S-5-SI-6 (Students will review and analyze scientific investigations and explanations of other students.)
- S-5-ESS-3 (Students will investigate living organisms' effects (e.g., changes in the composition of the atmosphere and the environment) on the Earth system.)
- S-6-SI-1 (identify and refine questions that can be answered through scientific investigations combined with scientific information.)
- S-6-SI-2 (use appropriate equipment (e.g., binoculars), tools (e.g., beakers), techniques (e.g. ordering), technology (e.g., calculators), and mathematics in scientific investigations.)
- S-6-SI-3 (use evidence (e.g., orderings, organizations), logic, and scientific knowledge to develop scientific explanations.)
- S-6-SI-4 (Students will design and conduct different kinds of scientific investigations to answer different kinds of questions.)
- S-6-SI-5 (communicate (e.g., speak, write) designs, procedures, and results of scientific investigations.)
- S-6-SI-6 (Students will review and analyze scientific investigations and explanations of other students.)
- S-6-LS-2 (Students will analyze internal or environmental stimuli and organisms' behavioral responses. Explore how organisms' behavior changes through adaptation.)
- S-6-LS-5 (Students will investigate factors (e.g., resources, light, water) that affect the number of organisms an ecosystem can support.)
- S-7-SI-1 (Students will identify and refine questions that can be answered through scientific investigations combined with scientific information.)
- S-7-SI-2 (Students will use appropriate equipment (e.g., spring scales), tools (e.g., spatulas), techniques (e.g., measuring), technology (e.g., computers), and mathematics in scientific investigations.)
- S-7-SI-3 (Students will use evidence (e.g., measurements), logic, and scientific knowledge to develop scientific explanations.)
- S-7-SI-4 (Students will design and conduct different kinds of scientific investigations to answer different kinds of questions.)
- S-7-SI-5 (Students will communicate (e.g., write) designs, procedures, and results of scientific investigations.)
- S-7-SI-6 (Students will review and analyze scientific investigations and explanations of other students.)
- S-7-LS-4 (Students will investigate biological adaptation and extinction.)
- S-8-SI-1 (identify and refine questions that can be answered through scientific investigations combined with scientific information.)
- S-8-SI-2 (Students will use appropriate equipment (e.g., barometers), tools (e.g., meter sticks), techniques (e.g., computer skills), technology (e.g., computers), and mathematics in scientific investigations.)

- S-8-SI-3 (use evidence (e.g., computer models), logic, and scientific knowledge to develop scientific explanations.)
- S-8-SI-4 (design and conduct different kinds of scientific investigations to answer different kinds of questions.)
- S-8-SI-5 (communicate (e.g., write, graph) designs, procedures, and results of scientific investigations.)
- S-8-SI-6 (Students will analyze diversity and adaptations (e.g., changes in structure, behaviors, or physiology).)
- S-8-LS-4 (investigate and analyze populations and ecosystems.)
- S-8-LS-5 (Students will analyze diversity and adaptations (e.g., changes in structure, behaviors, or physiology).)

### English Language Arts:

- ELA-P-R-5 (Students will choose and read a variety of materials to gain understanding of the world around them and of the nature of texts, including literary materials (e.g., plays, poetry, short stories) and transactive materials (e.g., letters, articles).)
- ELA-4-W-6 (Students will identify and apply characteristics of effective writing in producing and discussing their own work, including awareness of audience and purpose, organization, idea development, and standards of correctness (e.g., mechanics, grammar, spelling).)
- ELA-5-W-6 (Students will apply characteristics of effective writing in their own works and recognize them in works of others, including awareness of audience and purpose, organization, idea development, and standards of correctness (e.g., mechanics, grammar, spelling).)
- ELA-6-W-1 (Students will respond to reading, listening, observing, and inquiry through applying writing-to-learn strategies in situations such as graphic organizers, notetaking, journals, and logs and writing-to-demonstrate-learning strategies in situations such as graphic organizers, open-response questions, and summaries.)
- ELA-7-W-1 (Students will respond to reading, listening, observing, and inquiry through applying writing-to-learn strategies in situations such as graphic organizers, notetaking, journals, and logs and writing-to-demonstrate-learning strategies in situations such as graphic organizers, open-response questions, and summaries.)
- ELA-8-W-5 (Students will write personal pieces to communicate ideas.)

## Core Content

### Science:

- SC-E-SI-1 (ask simple scientific questions that can be investigated through observations combined with scientific information)
- SC-E-SI-2 (use simple equipment (e.g., magnifiers, magnets), tools (e.g., metric rulers, thermometers), skills (e.g., classifying, predicting), technology (e.g., electronic media, calculators, World Wide Web), and mathematics in scientific investigations.)
- SC-E-SI-3 (use evidence (e.g., observations, data) from simple scientific investigations and scientific knowledge to develop reasonable explanations.)
- SC-E-SI-4 (design and conduct simple scientific investigations.)
- SC-E-SI-5 (communicate (e.g., draw, graph, write) designs, procedures, observations, and results of scientific investigations.)
- SC-E-SI-6 (review and ask questions about scientific investigations and explanations of other students)
- SC-E-3.1.2 (Organisms have basic needs. For example, animals need air, water, and food; plants need air, water, nutrients, and light. Organisms can survive only in environments in which their needs can be met.)
- SC-E-3.3.2 (The world has many different environments. Distinct environments support the lives of different types of organisms. When the environment changes, some plants and animals survive and reproduce, and others die or move to new locations.)
- SC-E-3.3.3 (All organisms, including humans, cause changes in the environment where they live. Some of these changes are detrimental to the organism or to other organisms; other changes are beneficial (e.g., dams built by beavers benefit some aquatic organisms but are detrimental to others).)
- SC-M-SI-1 (refine and refocus questions that can be answered through scientific investigation combined with scientific information)
- SC-M-SI-2 (use appropriate equipment, tools, techniques, technology, and mathematics to gather, analyze, and interpret scientific data.)
- SC-M-SI-3 (use evidence (e.g., computer models), logic, and scientific knowledge to develop scientific explanations.)
- SC-M-SI-4 (design and conduct scientific investigations.)
- SC-M-SI-5 (communicate (e.g., write, graph) designs, procedures, observations, and results of scientific investigations.)
- SC-M-SI-6 (review and analyze scientific investigations and explanations of other students.)
- SC-M-3.4.1 (Biological change over time accounts for the diversity of species developed through gradual processes over many generations. Biological adaptations include changes in structures, behaviors, or physiology that enhance survival and reproductive success in a particular environment.)
- SC-M-3.4.2 (Extinction of a species occurs when the environment changes and the adaptive characteristics of a species are insufficient to allow its survival. Extinction of species is common; most of the species that have lived on Earth no longer exist.)
- SC-M-3.5.1 (A population consists of all individuals of a species that occur together at a given place and time. All populations living together and the physical factors with which they interact compose an ecosystem.)

#### Writing:

- WR-E-1.1 (*Reflective writing* includes the writer's examination of his/her writing skills, abilities, approaches, and products.)
- WR-M-1.1 (*Reflective writing* includes the writer's examination of his/her writing skills, abilities, approaches, and products.)

#### Reading:

- RD-E-1.0.6 (Explain the meaning of a passage taken from texts appropriate for elementary school students.)
- RD-M-1.0.11 (Explain the meaning of a passage taken from texts appropriate for middle-level students.)